ACTA OCEANOLOGICA SINICA

Subject index to Vol. 9, 1990

Marine Hydrology

1 ……The equilibrium range of wind wave frequency spectrum
Wen Shengcheng (*S. C. Wen*) (文圣常), *Zhang Dacuo* (张大错), *Chen Bohai* (陈波海) *and Guo Peifang* (郭佩芳)

13 ……Combined refraction and diffraction models for sea waves over complicated topography and with currents in shallow water
Yin Baoshu (尹宝树) *and Jiang Decai* (蒋德才)

25 ……Seasonal responses of monthly mean sea levels in the Bohai Sea to hydrometeorological forcing and their double screening regression models
Chen Shangji (陈上及), *Ma Jirui* (马继瑞) *and Yu Jiye* (于继业)

37 ……Nonlinear tidal waves in a kind of estuary with gradually varying cross-section
Du Yong (杜　勇), *Chen Zongyong* (陈宗镛) *and Ye Anle* (叶安乐)

159……A three-layer model for the thermal structure in the Huanghai Sea
Wan Bangjun (万邦君), *Guo Binghuo* (郭炳火) *and Chen Zeshi* (陈则实)

173……A finite element model of circulation in shallow water with moving boundary on tidal-flat
Zhang Cunzhi (张存智), *Yang Lianwu* (杨连武) *and Dou Zhenxing* (窦振兴)

187……Water masses classification of the upper layer in the Equatorial Western Pacific using ISODATA of fuzzy cluster
Chen Shangji (陈上及) *and Du Bing* (杜　兵)

315……On the fundamental dynamics of barotropic circulation in shallow seas
Feng Shizuo (冯士筰)

331……Diagnostic study of the summer thermocline depth in the Huanghai Sea and the East China Sea
Yang Dianrong (杨殿荣), *Kuang Guorui* (匡国瑞), *Zhang Yulin* (张玉琳) *and Zhou Dejian* (周德坚)

343……CHGS method for numerical forecasting of typhoon waves—I. Spectrum of waves in growing phase
Sui Shifeng (隋世峰)

475……A j, v model for the analysis and prediction of tides

Chen Zongyong（陈宗镛），*Huang Zuke*（黄祖珂），*Zhou Tianhua*（周天华），*Tang Enxiang*（汤恩祥）*and Wang Yuzhou*（王宇宙）

487……A three-dimentional model of the northeast East China Sea，with application to the M_2 current field
Tang Yuxiang（汤毓祥）

499……A numerical study for the coastal upwelling and the coastal front off Zhejiang coast
Liu Xianbing（刘先炳）*and Su Jilan*（苏纪兰）

Marine Meteorology

51 ……The numerical criteria and characteristics of El Nino and La Nina
Wang Shiping（王世平）

61 ……Threshold autoregression models for forecasting El Nino events
Pu Shuzhen（蒲书箴）*and Yu Huiling*（于惠苓）

69 ……The computation of maximum wind speeds of typhoon
Chen Kongmo（陈孔沫）*and Qin Zenghao*（秦曾灏）

203……Influence of air-sea interaction on SSTA in different spacial scales
Sun Jilin（孙即霖）*and Zuo Zhonglao*（左中道）

219……An analysis on El Nino processes during 1949～1987
Zhan Shuyun（战淑芸）*and Yang Shurui*（杨淑瑞）

353……El Nino and anti-El Nino events in 1854～1987
Zang Hengfan（臧恒范）*and Wang Shaowu*（王绍武）

363……Nonlinear waves and their barotropic stability in the tropical ocean and atmosphere
Liu Qinyu（刘秦玉）*and Qin Zenghao*（秦曾灏）

373……Statistical study on the spatial-temporal distribution features of the arctic sea ice extent
Wang Xiaolan（王小兰），*Fan Zhongxiu*（范钟秀），*Peng Gongbing*（彭公炳）*and Zhou Enji*（周恩济）

513……Analysis of the air-sea heat exchange during the El Nino event in 1983
Zhu Yafen（朱亚芬）*and Yang Dasheng*（杨大升）

527……The PNA wavetrain and the sea surface temperature in the Northern Pacific
Lin Xuechun（林学椿）

539……The effect of unstable inertia-gravity wave on the occurrence and the development of typhoon and tropical cyclone
Niu Xuexin（钮学新）

Marine Chemistry

81 ····· Preliminary study on the distribution of nutrients, organic matter, trace metals in sea surface microlayer in Xiamen Bay and Jiulong Estuary
Hong Huasheng (洪华生) *and Lin Jie* (林　杰)

91 ····· Adsorption of uranyl complex ions on hydrous titanium oxide— Ⅱ. Infrared spectrum investigation
Fu Wentong (傅文通) *and Luo Bingkun* (骆炳坤)

97 ····· The use of urushiol-titanium chelate polymer as an anticorrosive coating for marine application
Hu Bingluan (胡炳环), *Chen Wending* (陈文定), *Lin Jinhuo* (林金火), *Zhao Fang* (赵　芳) *and Gan Jinghao* (甘景镐)

109 ····· The study of mixing rates and sedimentation rates in Meizhou Bay sediments
Chen Shaoyong (陈绍勇), *Li Wenquan* (李文权), *Shi Wenyuan* (施文远) *and Huang Yipu* (黄亦普)

227 ····· Neutron activation analysis (NAA) and geochemical studies of 38 elements in surface sediments from lower reach and estuary of Huanghe (Yellow River)
Li Peiquan (李培泉), *Chih-an Huh* (扈治安), *Zhihxin Zhang* (张树莘), *Weizhi Tian* (田伟之) *and Lu Guanshan* (卢光山)

247 ····· Interfacial geochemistry of barium in suspension and sediment from Zhujiang Estuary
Zeng Xiangfei (曾翔飞), *Zheng Jianlu* (郑建禄), *Liu Zhiqing* (林植青), *Liang Ziqiang* (梁自强) *and Chen Kwanming* (陈均铭)

255 ····· Flow analysis for determination of inorganic arsenic and antimony in seawater with on-line liquid nitrogen trap and hydride generation
Lu Xiankun (陆贤昆), *Li Jing* (李　静), *Chen Shuzhu* (陈淑珠) *and Dai Guosheng* (戴国升)

263 ····· Chemistry of marine resources—— XVI. A new potassium reagent and its enrichment behaviour for potassium ion in seawater
Sun Yushan (孙玉善), *Feng Fei* (冯　飞), *Liang Weimin* (梁卫民), *Peng Qiqiang* (彭启强) *and Yang Fushun* (杨富顺)

277 ····· Fertility of domestic sewage and eutrophication in estuarine harbor
Wu Yuduan (吴瑜端), *Zeng Jiye* (曾继业), *Zheng Zhihong* (郑志宏) *and Luo Xiaohong* (骆肖红)

389 ····· The pathway and fate of the heavy metal mixture in Xiamen marine experiment enclosures
Li Jinxia (李锦霞), *Du Rongqui* (杜荣归), *Zhang Gongxun* (张功勋), *C. S. Wong*, *R. W. Macdonad and W. K. Jonhson*

405 ····· Phosphate limitation of phytoplankton growth in the Changjiang Estuary
Hu Minghui (胡明辉), *Yang Yiping* (杨逸萍), *Xu Chunling* (除春霖) *and P. J. Harrison*

547 ····· Study of aquatic chemical characteristic in some bays along the coastal region of Zhejiang Province
Wang Yuheng (王玉衡), *Dong Henglin* (董恒霖) and *Jiang Guochang* (蒋国昌)

555……Oscillopolarographic determination of microsilicon in seawater
Chen Liyi (陈立义)

Marine Geology and Geomorphology

119……Distribution of recent Ostracoda from the coastal zone of Gaode and Weizhou Island, Zhuang Autonomous Region of Guangxi
Ruan Peihua (阮培华)

283……The evolution of the coral reefs in the middle and north parts of the South China Sea and its relation with tectonic and eustatic movements
Geng Xiushan (耿秀山), *Fu Mingzuo* (傅命佐) *and Wu Baoling* (吴宝铃)

413……Analyses of active faults, seismic activities and sea floor unstable factors of the Zhujiang River Mouth Basin and its adjacent areas
Liu Yixuan (刘以宣), *Zhang Yixiang* (张毅祥), *Zhuo Jialun* (卓家伦), *Xie Yixuan* (谢以萱), *Lu Chengbing* (陆成斌), *Zhong Jianqiang* (钟建强) *and Zhan Wenhuan* (詹文欢)

561……Fossil fauna and transgressive sequence from Core QC_2 in the South Huanghai Sea
Zhu Xionghua (朱雄华) and *Lin Hemao* (林和茂)

Marine Biology and Fishery

135……Research on the short-term fishery forecasting of Spanish macherel (*Scomberomerus niphonius*)
Wei Sheng (韦　晟) *and Zhou Binbin* (周彬彬)

145……Effects of a mixture of Cu, Cd, Hg and Zn on marine plankton: Marine Ecosystem Enclosure Experiment
Wu Jinping (吴晋平) *et al.*

151……The effects of sediment from an industrial outfall area on a marine planktonic ecosystem
Wu Jinping (吴晋平) *et al.*

293……Distribution and number change of the Littorinid (Gastropoda) on intertidal hard bed in the Jiulong Estuary, Fujian Province
Yi Jiansheng (易建生) *and Li Puxue* (李复雪)

303……The study of productivity in the Bohai Sea——11. Primary productivity and estimation of potential fish catch
Fei Zunle (费尊乐), *Mao Xinghua* (毛兴华), *Zhu Mingyuan* (朱明远), *Li Bing* (李　冰), *Li Baohua* (李宝华), *Guan Yanghong* (管水红), *Zhang Xinsheng* (张新胜) *and Lu Ruihua* (吕瑞华)

429……Ecological studies on the Hydromedusae, Siphonophores and Ctenophores in the Xiamen Harbour adjacent waters
Lin Mao (林　茂) *and Zhang Jinbiao* (张金标)

439……Development rate of *Labidocera euchaeta* Giesbrecht in Xiamen Harbor
Lin Senjie (林森杰) *and Li Song* (李　松)

449……Numerical simulation for the two-dimensional nonlinear shallow water waves
Tao Jianhua (陶建华) *and Zhang Yan* (张　岩)

579……Preliminary study of gonadotropin-releasing analogue (GnRH-A) initiated gonadal development of amphioxus
Fang Yongqiang (方永强), *Qi Xiang* (齐　襄), *Liang Ping* (梁　萍) and *Hong Guiqing* (洪桂英)

Marine Engineering

587……Application of Monte-Carlo statistical experiments in design of ocean engineering-Estimating the parameters, models and probabilities
Liu Defu (刘德辅), *Shi Jiangang* (施建刚) *and Zhou Zhigang* (周志刚)

599……A stability analysis for the sheared oil film contained by the boom
Zhao Wenqian (赵文谦), *Jiang Wei* (江　渭) *and Wu Zhiwei* (吴至维)

Notes

459……Study on the reproduction of *Gelidium amansii* Lamx.
Huang Lijuan (黄礼娟), *Zhao Shuzheng* (赵淑正), *Xi Zhenle* (席振乐), *Wang Lichao* (王立超) *and Sun Song* (孙　送)

465……Distribution of inorganic phosphate and dissolved oxygen and their relationship in the coastal upwelling area off Zhejiang
Jiang Guochang (蒋国昌) *and Wang Yuheng* (王玉衡)

611……Distribution of chlorophyll a, phorosynthesis and their relations to the environmental factors in the Central South China Sea
Chen Xingqun (陈兴群), *Chen Qihuan* (陈其焕) and *Zhuang Liangzhong* (庄亮钟)

618……Study on ecology of foulers on buoys in Dianbai, Guangdong, China
Lin Sheng (林　盛), *Huang Zongguo* (黄宗国), *Li Chuanyan* (李传燕), *Zheng Chengxing* (郑成兴) and *Wang Jianjun* (王建军)

622……Role of mangrove in mercury cycling and removal in the Jiulong Estuary
Lin Peng (林　鹏) and *Chen Ronghua* (陈荣华)